

CLAIMS

What is claimed is:

1. An apparatus for joining accessories to panels on the interior of vehicles, said system comprising:

a molded fastener body including:

a head;

a neck joined to the head;

a flexible skirt joined to the neck;

an anti-rotation feature joined to both the neck and the skirt;

and

a pair of support legs extending perpendicularly from an underside of the skirt; and

an insert positioned between the pair of support legs including:

a generally planar body having opposed sides; and

a pair of spaced flexible wings each formed to extend away from one of the opposed sides.

2. The apparatus of Claim 1, wherein said molded fastener body comprises an elastomeric material.

3. The apparatus of Claim 1, wherein said insert comprises a metallic material.

4. The apparatus of Claim 1, wherein said anti-rotation feature is generally formed in a "V" shape having an apex joined to the neck and a body portion extending distally therefrom.

5. The apparatus of Claim 1, further comprising a generally planar portion located between the neck and the skirt, having the neck and the anti-rotation feature supported from an upper surface thereof and the skirt extending at an angle therefrom.

6. The apparatus of Claim 1, comprising a protective guard tapering lead-in formed at a distal end of each of the support legs.

7. The apparatus of Claim 1, comprising a cross member joining distal ends of the support legs and partially supporting the metal insert adjacent connecting points between the flexible wings and the metal insert.

8. A system for fastening a trim piece to a vehicle, the system comprising:

a molded fastener body including:

a head; a neck joined to the head; an anti-rotation feature joined to both the neck and the skirt; and a pair of support legs extending perpendicularly from an underside of the skirt; and

a metal insert positioned between the pair of support legs including a pair of spaced flexible wings each formed to extend oppositely away from each other; and

a trim piece having at least one dog-house assembly joined thereto for receiving the molded fastener body.

9. The system of Claim 8, comprising a vehicle aperture generally having a rectangular shape for receiving the pair of support legs and the spaced flexible wings of the molded fastener body.

10. The system of Claim 9, further comprising a flexible skirt formed between the neck and support legs, the flexible skirt acting as a moisture/soil seal between the molded fastener body and a vehicle plate surface having the vehicle aperture adjacent thereto.

11. The system of Claim 8, wherein the trim piece and the at least one dog-house assembly comprise an elastomeric material.

12. The system of Claim 8, further comprising:
the anti-rotation feature has a V-shaped body; and
the dog-house assembly includes a V-shaped slot to receive the anti-rotation feature.

13. The system of Claim 8, further comprising:
the dog-house assembly includes a circular shaped aperture to receive the neck of the molded fastener; and
the dog-house assembly includes a throat region providing an interference fit between the throat region and the neck to positively retain the neck within the circular shaped aperture when the molded fastener is joined to the dog-house assembly.

14. The system of Claim 8, comprising an assembly formed by the molded fastener body releasably joined to the dog-house assembly of the trim piece and the flexible wings engageably joined with the vehicle aperture.

15. A method for forming fasteners and vehicle trim pieces for attachment to a vehicle, comprising the steps of:

forming a dog-house assembly on a vehicle trim piece having a receiving engagement slot;

molding a metal insert having deflection wings into a polymeric fastener body;

moldably attaching each of a head, neck and anti-rotation feature to an end of the fastener body;

connecting the head, neck and anti-rotation feature with the receiving engagement slot;

inserting the metal insert and deflection wings into an aperture of a vehicle to releasably join the vehicle trim piece to the vehicle.

16. The method of Claim 15 further comprising forming the anti-rotation feature having a general V-shape.

17. The method of Claim 15 further comprising molding a flexible skirt between the neck and the metal insert.

18. The method of Claim 17, further comprising molding a planar surface area between the flexible skirt and the neck.

19. The method of Claim 18, comprising positioning the planar surface open below the receiving engagement slot and the head, neck and anti-rotation feature above the receiving engagement slot.